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Similarly, he argues that

The heterocyclic variable is not precise and definite enough to provide a clear-cut indication of the scope of the subject matter embraced by the claim. The heterocyclic concept is so broad that it causes the claim to have a potential scope or protection beyond that which is justifed by the specification disclosure.

Office Action at 7.

Further, the Examiner asserted that

The specification serves various purposes, it sets forth the prior art, that which applicants found unsuccessful, a defensive publication, that which applicants decided not to claim, or compounds that stop the infection, but kill the patient. The reader cannot tell the extent of the new invention, unless it is clearly set forth in the claims, out of the mixed pieces of information of the specification. The claims have to clearly set out that which is claimed.

Office Action at 6.

Applicants respectfully traverse. First and foremost, the Examiner's attention is directed to the specification where the terms "heterocyclic" and "heteroaryl" are specifically defined. Those definitions are excerpted below:

The term "heteroaryl", as used herein, unless otherwise indicated, includes an organic radical derived from an aromatic heterocyclic compound by removal of one or more hydrogens, such as benzimidazolyl, benzofuranyl, benzofurazanyl, 2H-1-benzopyranyl, benzothiadiazine, benzothiazinyl, benzothiazolyl, benzothiophenyl, benzoxazolyl, chromanyl, cinnolinyl, furazanyl, furopyridinyl, furyl, imidazolyl, indazolyl, indolinyl, indolizinyl, indolyl, 3H-indolyl, isoindolyl, isoquinolinyl, isothiazolyl, isoxazolyl, naphthyridinyl, oxadiazolyl, oxazolyl, phthalazinyl, pteridinyl, purinyl, pyrazinyl, pyridazinyl, pyrimidinyl, pyrazolyl, pyrrolyl, quinazolinyl, quinolinyl, quinoxalinyl, tetrazolyl, thiazolyl, thiadiazolyl, thienyl, triazinyl and triazolyl, wherein said (C_1 - C_1 0)heteroaryl is optionally substituted on any of the ring carbon atoms capable of forming an additional bond by one or two substituents independently selected from F, Cl, Br, CN, OH, (C_1 - C_4)alkyl, (C_1 - C_4)perfluoroalkyl, (C_1 - C_4)perfluoroalkoxy, (C_1 - C_4)alkoxy and (C_3 - C_8)cycloalkyloxy. The foregoing groups, can be C-attached or N-attached where such is possible. For instance, pyrrolyl can be pyrrol-1-yl (N-attached) or pyrrol-3-yl (C-attached).

The term "heterocyclyl", as used herein, unless otherwise indicated, includes an organic radical derived from a non-aromatic heterocyclic compound by removal of one or more hydrogens, such as 3-azabicyclo[3.1.0]hexanyl, 3-azabicyclo[4.1.0]-heptanyl, azetidinyl, dihydrofuranyl, dihydropyranyl, dihydrothienyl, dioxanyl, 1,3-dioxolanyl, 1,4-

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> dithianyl, hexahydroazepinyl, hexahydropyrimidine, imidazolidinyl, imidazolinyl, isoxazolidinyl, morpholinyl, oxazolidinyl, piperazinyl, piperidinyl, 2H-pyranyl, 4H-pyranyl, pyrazolidinyl, pyrazolinyl, pyrrolidinyl, 2-pyrrolinyl, 3-pyrrolinyl, quinolizinyl. tetrahydrofuranyl, tetrahydropyranyl, 1,2,3,6-tetrahydropyridinyl, tetrahydrothienyl, tetrahydrothiopyranyl, thiomorpholinyl, thioxanyl and trithianyl. The foregoing groups, can be C-attached or N-attached where such is possible. For example, piperidinyl can be piperidin-1-yl (N-attached) or piperidin-4-yl (C-attached). The foregoing groups, as derived from the compounds listed above, can be optionally substituted where such is possible by a suitable substituent, such as oxo, F, Cl, Br, CN, OH, (C₁-C₄)alkyl, (C₁- C_4)perfluoroalkyl, (C_1 - C_4)perfluoroalkoxy, (C_1 - C_4)alkoxy, or (C_3 - C_8)cycloalkyloxy.

Subject specification at 6, lines 10-37.

These terms appear in two different contexts in claim 1. The first appearance of the term "heterocyclic" is in the definition of "A", wherein the heterocycles encompassed by "A" are specifically depicted in the claim. Thus, there should be no issue with the term as it appears in this context.

"Heterocyclic" and "heteroaryl" also appear in the definitions of R¹-R¹³, X, Z, and R¹⁸-R²². However, these terms would be read in light of the specification. In this regard, the Examiner's attention is respectfully directed to MPEP § 2111.01, which provides that during examination, the words of the claims must be given their plain meaning unless applicant has provided a clear definition in the specification. (*Citing In re Zletz*, F.2d 319, 321 (Fed. Cir. 1989), and *In re Vogel*, 422 F.2d 438, 441 (Fed. Cir. 1970).) Therefore, the skilled reader of the specification would understand that the terms "heteroaryl" and "heterocyclic" as they are referred to in the context of R¹-R¹³, X, Z, and R¹⁸-R²², refer, respectively, to (a) an organic radical derived from an aromatic heterocyclic compound by removal of one or more hydrogens, or (b) an organic radical derived from a non-aromatic heterocyclic compound by removal of one or more hydrogens.

Moreover, the skilled artisan, familiar with the non-limiting list of suitable heteroaryl and heterocyclic radicals encompassed by the definitions provided at page 6 of the subject specification (see the radicals listed on page 6, lines 12-23, and 26-37) would readily appreciate the scope of suitable heteroaryl or heterocyclic groups, as well as recognize that the terms plainly refer to those compounds in which the heteroatom is N, O, or S. While the examiner may have encountered other applications in which the term "heteroatom" refers to P, B, or As, a thorough review of the specification will reveal that Applicants are not using this term in any way that departs from the conventional spirit of the term. Applicants respectfully submit that a skilled organic chemist would not take issue with the definition of the terms "heteroaryl" or "heterocyclic", especially in view of the list of suitable heteroaryl and heterocyclic groups encompassed by the claims. The skilled artisan will readily recognize those radicals and their starting materials and with USERSVDOCSXLA21952XLPPCA4457J011.DOC/210223 / PC11074 and re 2-26-03 oa

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those definitions provided in the specification, he or she will readily appreciate the metes and bounds of the claims.

In view of the foregoing remarks, favorable reconsideration and withdrawal of the Section 112, first and second paragraph, rejections are respectfully requested.

Thus, reconsideration and allowance are earnestly solicited. If after careful consideration of the remarks herein, the Examiner maintains that there are issues that remain an impediment to allowance, he is invited to telephone the undersigned to discuss such matters so that prosecution of this application can be expedited.

Respectfully submitted,

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